STAT MedEvac®

A Service of the Center for Emergency Medicine of Western Pennsylvania Inc.®

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US Department of Transportation
Docket Management System
1200 New Jersey Ave, SE
West Building Ground Floor
Room W12-140
Washington, DC 20590

To whom it may concern:

Enclosed is a petition to the Federal Aviation Administration (FAA) for an exemption from: Sections 135.213(a) and (b), 135.219, and 135.225(a) (1), (a) (2), (f), and (g) of Title 14, Code of Federal Regulations.

The Center for Emergency Medicine, d/b/a STAT MedEvac is an emergency medical services (EMS) operator, with over 25 years of experience in our operational area. This petition would authorize the Center for Emergency Medicine to perform instrument flight rules (IFR) departures and IFR instrument approach procedures (IAP) at airports and heliports that do not have an approved weather reporting source.

This petition for exemption has been previously granted to other EMS helicopter operators, Exemption 9490 and Exemption 9665. I have used the same basic verbiage in hopes that the petition for exemption will be granted to us based on appropriateness and precedence.

Thank you in advance for your consideration. Should you have any questions, I may be reached at 412-460-3059.

Richard Gross
Director of Operations
Center for Emergency Medicine of Western Pennsylvania, Inc.
STAT Medevac
Enclosure (1)

Center for Emergency Medicine
d/b/a STAT MedEvac
Certificate # : E3MA774L

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Petitions for an exemption from Sections 135.213(a) and (b), 135.219, and 135.225(a)(1),
(a)(2), (f), and (g) of Title 14, Code of Federal Regulations.

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The Center for Emergency Medicine requests relief from the following sections:

A. Section 135.213(a) states, in pertinent part, that whenever a person operating an aircraft under part 135 is required to use a weather report or forecast, that person shall use that of the US National Weather Service (NWS), a source approved by the NWS, or a source approved by the Administrator. However, for operations under visual flight rules (VFR), the pilot in command (PIC) may, if such a report is not available, use weather information based on that pilot's own observations or those of other persons competent to supply appropriate observations.

B. Section 135.213(b) states, in pertinent part, that for the purposes of paragraph (a) of this section, weather observations made and furnished to pilots to conduct IFR operations at an airport must be taken at the airport where those IFR operations are conducted, unless the Administrator issues operations specifications Operations Specifications allowing the use of weather observations taken at a location not at the airport where the IFR operations are conducted. The Administrator issues such Operations Specifications when, after investigation by the NWS and the FAA Flight Standards District Office (FSDO) charged with the overall inspection of the certificate holder, it is found that the standards of safety for that operation would allow the deviation from this paragraph for a particular operation for which an air taxi/commercial operator (ATCO) operating certificate has been issued.

C. Section 135.219 states that no person may take off an aircraft under IFR or begin an IFR or over-the-top operation unless the latest weather reports or forecasts, or any combination of them, indicate that weather conditions at the estimated time of arrival (ETA) at the next airport of intended landing will be at or above authorized IFR landing minimums.

Section 135.225(a) states that no pilot may begin an IAP to an airport unless:

1. That airport has a weather reporting facility operated by the NWS, a source approved by the NWS, or a source approved by the Administrator; and

2. The latest weather report issued by that weather reporting facility indicates that weather conditions are at or above the authorized IFR landing minimums for that airport.

D. Section 135.225(f) states that if takeoff minimums are specified in part 97 of this chapter for the takeoff airport, no pilot may takeoff an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a) (1) of this section are less than the takeoff minimums specified for the takeoff airport in part 97 or in the certificate holder's Operations Specifications.

E. Section 135.225(g) states that except as provided in paragraph (h) of this section, if takeoff minimums are not prescribed in part 97 of this chapter for the takeoff airport, no pilot may takeoff an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a) (1) of this section are less than that prescribed in part 91 of this chapter or in the certificate holder's Operations Specifications.

The Center for Emergency Medicine supports this request for exemption with the following information:

During the early 90's the Weather Service was closing many Flight Service Stations through-out the United States, with the promise that AWOS stations would fulfill the needs for weather reporting. Of course, those AWOS/ASOS installations that were completed were only at airports and none to support hospitals; unlike at airports, airport improvement funds (AIP) are not available to support the purchasing of AWOS systems at private hospital heliports. In the mid-90's, and with the introduction of GPS as a signal-in-space (SIS), the helicopter EMS industry was finally provided a SIS that supported Copter IAPs to hospital heliports. In addition to providing higher level health care to critical patients needing emergency transport to a higher level medical facility, increased safety for the EMS operator also became possible by providing IFR capability above the CFIT threat during the enroute phase of flight. Even though there is still a need for more weather stations throughout the United States, to include within the Center for Emergency Medicine's operational area, the existing AWOS stations, and other weather sources located at airports, support The Center for Emergency Medicine's 60+ hospital-based Copter RNAV (GPS) procedures.

All of these Copter IAPs would require weather reporting without the approval of this petition. It would cost an estimated $3,900,000 to purchase and install an AWOS-3 at each of these hospitals; a cost that neither the hospitals themselves, nor Center for Emergency Medicine, could justify, and which is roughly four-times the cost to establish the IAPs themselves.

During a recent seminar organized by the French aerospace institute to discuss Helicopter GPS approaches, Philippe Rollet, Eurocopter's manager of operational research stated, "Many helicopter pilots choose to fly under VFR rules to avoid IFR constraints. They often fly in marginal weather conditions, which threaten safety. "U.S. statistics show that 99 percent of weather-related helicopter accidents affect VFR flights".

The Center for Emergency Medicine believes that although many modern helicopters have Instrument Flight Rules (IFR) capability this has not been widely used because the NAS does not support helicopter IFR operations to the destination heliports. In the U.S., only an estimated 10 percent of helicopter flights are conducted under IFR. Since the mid-to-late 90's, and with the introduction of GPS as a SIS for Copter IAPs, advancements have been realized and approximately 230 Copter RNAV (GPS) IAPs have been developed. Nearly all of these advancements have needed to be privately funded; although FAA has invested significantly in other segments of the aviation community. The U.S. Congress has given special attention to the EMS mission and hospital GPS-based IAPs in Section 103, Federal Aviation Administration Operations, (b) Authorized Expenditures – Section 106(k)(2), and thereby duly noted the benefits to society EMS operators provide, and the importance of supporting GPS-based approach procedures to hospitals.

In a 2005 FAA Air Ambulance Task Force Recommendation Document #AER-10 it is stated that visibility is a causal factor in accidents; "It appears marginal visibility has been a significant factor in a number of helicopter medical evacuation accidents operating under VFR in the past several years." In addition, the recent FAA notice #8000.293 identifies that night, Visual Flight Rules (VFR), and Inadvertent Instrument Meteorological Conditions (INC), as primary areas of concern for HEMS operations.

The Center for Emergency Medicine believes safety can be improved by operations in the IFR system. That is why the Center for Emergency Medicine was the first to implement helicopter GPS approaches in the EMS industry

Today EMS helicopter operators are using helicopter GPS approaches and this industry has an over ten year history to show that the ability to file and fly IFR under Part 91 has a great safety advantage in the reduction of EMS helicopter accidents. Having the ability to conduct these GPS approaches under Part 135 would give the EMS industry not just an equivalent level of safety, but a far greater level of safety. In the ten plus year history thousands of Helicopter GPS approaches have been flown throughout the United States with no accidents. The Center for Emergency Medicine only knows of two of over three hundred hospitals serviced by an IAP that have weather reporting stations. By granting this exemption, the FAA will open the safe use of Copter RNAV (GPS) IAPs at the hospitals within the Center for Emergency Medicine's IFR operations. To deny this petition will threaten relegating Center for Emergency Medicine to conducting its EMS missions under VFR, which both reduces safety with increased CFIT risks, and reduces the level of service and benefits to society by limiting Center for Emergency Medicine's ability to conduct its transports of critical patients from rural hospitals to level one trauma centers and other acute care facilities.

In January 2006 the NTSB made recommendations that all legs of EMS operations be conducted under Part 135. The Center for Emergency Medicine believes the primary premise behind the NTSB recommendation for "all legs FAR 135" had to do with EMS accidents with respect to the VFR environment and not the IFR environment.

This recommendation is supported by the Center for Emergency Medicine and the EMS industry, but unless relief is granted from the current rules requiring weather reporting at each airport or heliport, operators cannot continue to file and fly IFR to needed locations.

The affected sections should be protecting EMS operators, but, instead are encouraging them to fly in marginal weather conditions under VFR because of the non availability of approved weather reporting sources.

We believe that it is safer to file an IFR flight plan and to operate under IFR than to conduct flight operations under VFR in marginal visual meteorological conditions (VMC). We believe operators are committed to the safe and successful completion of their EMS flights. We also believe that operating in marginal VMC weather conditions has been the single most frequent causal factor in EMS aircraft accidents.

The Center for Emergency Medicine states that the proposed exemption would increase the level of safety that is now provided by giving operators the ability to operate in accordance with IFR more often. This would minimize the need for marginal VFR flight operations. We believe that a fully trained crew, following proper IFR procedures, in a properly equipped aircraft, can only enhance safety.

We believe that granting the proposed exemption in regards to IAPs would not promote improper descent below minimums, because weather reporting is not needed once appropriate descent minimums are established for the specific IAP being used. This has been proven throughout more than ten years of experience by the helicopter industry. FAA's Standard Instrument Procedures (TERPS) criteria require establishing IAP minimums be increased when using a remote altimeter; therefore, already take into account the location of the nearest station for reporting barometric pressure readings when determining minimums. Each of Centers for Emergency Medicine's IAPs approved by FAA without local weather has been adjusted in accordance with TERPS and a Remote Altimeter Setting Source (RASS) adjustment made to the MDA.

Related to this petition, we note the FAA recently granted to fractional owners under 91.1039:

A. No pilot may begin an instrument approach procedure to an airport or heliport unless:

1. Either that airport or the alternate airport has a weather reporting facility operated by the U.S. National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator; and

2. The latest weather report issued by the weather reporting facility includes a current local altimeter setting for the destination airport. If no local altimeter setting is available at the destination airport, the pilot must obtain the current local altimeter setting from a source provided by the facility designated on the approach chart for the destination airport.

B. For flight planning purposes, if the destination airport does not have a weather reporting facility described in paragraph (a)(1) of this section, the pilot must designate as an alternate an airport or heliport that has a weather reporting facility meeting that criteria.

C. The MDA or Decision Altitude and visibility landing minimums prescribed in part 97 of this chapter or Special IAPs' as granted by the Operations Specifications are increased by 1/2 mile respectively, but not to exceed the required minimums for that airport when used as an alternate airport, for each pilot in command of a turbine-powered helicopter in category and class who has not served at least 75 hours as pilot in command in that aircraft.

We request the capability to operate all legs under Part 135 with a weather exemption, similar to that provided in Section 91.1039 and similar to the relief granted in FAR 135.225(b).

We believe people place their lives into the arms of the EMS system without thought –only hope. We believe that the proposed exemption would be in the public interest by providing safer operations. It would provide safer operations and increased EMS operations to more than 900 airports or heliports in the national airspace system that have approved IAPs, but do not have approved weather reporting sources. The proposed exemption would allow more patients to be moved safely and more efficiently within the parameters of the National Airspace and the Air Traffic Control System.

When trying to save a critically injured child or adult at a scene, or when a desperately ill patient needs transport from a small outlying facility to a large, urban hospital with specialized medical services, time is as much a determinant of outcome as specific injury or illness. The best decision is often not merely placing a patient in the first available ground ambulance and racing to the closest hospital. A fully integrated ground and air EMS system is more concerned with access time to a trauma center, the quality of care delivered during transport, and reduction of "out of hospital time" to the most appropriate tertiary setting as a means to improving patient outcomes.

We believe that the transportation of patients under the proposed exemption would be limited. The decision to transport would be made by medical personnel based on the patient's condition. If the patient is being transferred from one hospital to another,

a physician is involved in the decision to transfer. For patients whose illness or injury occurs outside of a hospital, "on scene" medical personnel have a variety of tools to help them identify the appropriate method of transport. These include numerical evaluation systems which clearly identify when a total score indicates air or ground transport.

The Center for Emergency Medicine proposes several conditions and limitations that would be included in the proposed exemption:

A. Authorization is limited to flight segments associated with an Air Ambulance mission to include the return to base leg of the mission.

B. Authorization is limited to IFR equipped and certified helicopters and pilots with a current 135.297 check.

C. Each helicopter operated under this exemption must be fully equipped, certified and maintained to conduct IFR operations under part 135. Each helicopter operated under this exemption must be equipped with an approved and operable radar altimeter and either an approved and operable weather radar or approved and operable lightning detection equipment or a data-uplink with capability for radar images.

D. Authorization is limited to pilots who annually complete an approved course on weather observation and instrument operating procedures for locations without weather reporting. The course will include, as a minimum, the following:

Ground School Course Curriculum

A. FAR Review.

This section will include a review of parts 1, 61, 91, and 135 as they apply to flight under IFR.
1.5 hours

B. Airmen Information Manual (AIM) Review.

A review of the AIM with special emphasis placed on IFR operations as covered in Chapter 5 and 10 (Special Instrument Operations) of the AIM.
1.0 hours

C. Interpreting Weather and Weather Reports/Forecasts.

A review of weather phenomenon and systems, as well as weather services available to the pilot such as sequence reports, area and terminal forecasts, pilot reports, and in-flight advisories.
2.0 *hours*

D. Instrument Chart Review.

Covers instrument flight planning, instrument procedures at both controlled and uncontrolled airports, and a review of instrument charts.
2.0 hours

E. Cockpit Resource Management (CRM).

A review would be required of key CRM concepts such as decision making and judgment, situational awareness, and management flight resources.
1.5 hours

F. Methods for Determining Weather Observations by the Pilot.

Covers methods for determining present visibility (measured or estimated), methods for determining estimated ceilings, and the methods for weather observation used by the NWS.
2.0 Hours

10.0 hours total

The Center for Emergency Medicine also states that safety has always been the underlying cause for establishing regulations governing flight. Throughout the regulatory process, the FAA, in accordance with the aviation industry, has developed a comprehensive set of regulations unparalleled throughout the world. Sound, effective rules are validated by thorough accident analysis. Where regulations are insufficient to provide appropriate levels of safety, these regulations are rewritten, until this goal is achieved.

The Center for Emergency Medicine states that regulations are also reviewed and revised to take advantage of ever changing and advancing technologies. 80 years of industry growth has elapsed since the first regulations governing flight were enacted. The industry has matured from navigating by lighted beacons to navigating by satellites.

We believe that just as the FAA, aviation, and the industry has evolved, so has the NWS. The weather gathering and dissemination system originally established was designated to support airplanes at airports providing commercial service to the public. We believe that the initial needs of airlines dictated that, with the resources available, the safest and most feasible locations for data collecting would be at the airport. These terminal reports were then collected and analyzed by a trained forecaster to develop an area forecast which could be used for terminals which did not have a weather observation station. The Center for Emergency Medicine believes that the safest and most practical weather.

gathering and communications procedures available were established, and now form the basis for the current procedures.

We state that once the initial regulatory framework was established, the problem was one of keeping up with the rapid growth of the industry, and this problem persists today. The Center for Emergency Medicine states that it was not, and still is not, within the FAA's budget to support weather observation stations for every new terminal, general aviation airport, or hospital heliport. Center for Emergency Medicine states that driven by cost and system limitations, the FAA has tried to keep pace with the growth of the industry by accepting modifications to the regulations to allow exceptions for weather reporting through Operations Specifications. The Center for Emergency Medicine states that by controlling flight operations through Operations Specifications, an equivalent level of safety is maintained, flexibility is provided for the operator, and an impossible burden is removed from the FAA.

We believe that Operations Specifications approvals for deviation from the FARs are common practice within the industry. The Center for Emergency Medicine states that presently five of the largest helicopter operators are certified to operate under IFR without weather reporting at certain sites. This is permitted through their part 135 Operations Specifications.

We state that presently, the FAA, through these Operations Specifications, issues approvals to conduct terminal IFR operations without weather observation facilities on the immediate site. Additionally, provisions exist which allow pilots operating in certain areas, to expand the service area report from one station to include a block of air space 60 miles long by 80 miles wide. However, these procedures still do not provide enough flexibility to ensure the safest operations possible for the EMS industry.

We believe that during the last 35 years, the NWS has upgraded and implemented new equipment as new technologies have emerged. The weather community has gone from visual observations to radar surveillance, computer enhancement, computer gathering and satellite observations.

We state that the FAA has also taken advantage of technology innovations, as evidenced by reducing the number of Flight Service Stations and weather reporting manned facilities around the country. The installation of Automated Weather Observation Station (AWOS/ASOS) systems, though good when available, cannot possibly provide coverage to every site. We believe that the method of collection of weather information and weather forecasting has improved dramatically, but changes to operational procedures have not been implemented to take advantage of these improvements. To enhance the safety of IFR operations, particularly as it relates to EMS necessitates that operating procedures change to keep pace with system improvements.

From the FAA's study, Rotorcraft Low Altitude IFR Benefit/Cost Analysis: Conclusions and Recommendations, published October 1993:

"Effective EMS operations require that IAP capabilities are available at both the hospital where the patient is picked up and the hospital where the patient is delivered ... Hospital heliports provide tremendous benefits to the nation in terms of providing EMS helicopters with rapid access to hospitals. Using these heliports, helicopter EMS services save lives and reduce morbidity (faster recovery from injury, decrease in long term disability, etc.) These benefits could be increased through the installation of non-precision IAPs at hospital heliports. This analysis indicates that, at many hospitals heliports, the benefit/cost ratio of a non-precision approach is very large. In a number of cases it is larger than 1,000 to 1." The study also cites the crux of the problem with IFR operations to these facilities, "Currently, a major constraint to the mission is the lack of available weather information. This is particularly true in rural areas where weather observations are often lacking."

We believe that denying the utilization of helicopters to their fullest capabilities is killing people, both by forcing EMS operators to operate under VFR in marginal conditions and by denying safe IFR operations to move patients who truly warrant rapid transport. *We* believe we are paying dearly for our limitations.

The Center for Emergency Medicine notes that there have been previous petitions for exemption that proposed similar relief to this request and that some of these petitions were denied. The Center for Emergency Medicine states that the major difficulty cited consistently in the FAA denials of exemption refer to a NTSB study based on data collected between 1964 and 1975. Center for Emergency Medicine states that this study reflects no helicopter IFR data. The Center for Emergency Medicine states that before considering this exemption, it should be urged that criteria for judgment be based on appropriate helicopter operations data. Again when this exemption was first requested no historical data existed. With over ten years of data with no accidents on GPS IFR approaches the findings of the NTSB of pilots descending below the MDA hold no credence. Also mentioned in the Conclusions and Recommendations of the 1993 Rotorcraft Low Altitude IFR Benefit/Cost Analysis:

- "The rotorcraft has different flight capabilities and limitations than fixed-wing aircraft and often performs unique missions."
- "When Rotorcraft conducts IFR approaches and departures, they have significantly more capability than fixed-wing aircraft."
- "Rotorcraft approaches to heliports/vertiports free approach slots to a runway."

We are now in the 21st century: IFR helicopter operations are being reconsidered and reshaped. Projects like the Extremely Low Visibility IFR Rotorcraft Approach (ELVIRA) workshop are drawing the lines to this fixture. The Center for Emergency Medicine believes that the granting of this exemption request is clearly aligned with the FAA's Mission Statement: 'To provide the safest, most efficient aerospace system in the world." The Center for Emergency Medicine states that first and foremost, we must enable EMS Helicopters to utilize the capabilities that have not been fully realized.

Finally, we recognize and understand the FAA's position on this finding. We believe if granted the operations under this exemption will always plan for and require an alternate airport with approved weather reporting.